

IN THE CLAIMS

Please amend the claims as follows:

1. (Currently Amended): An image forming apparatus, comprising: that includes a control part that provides configured to provide common services on control of hardware resources to a plurality of first applications that are executed in the image forming apparatus using the common services provided by the control part; so as to be able to include a plurality of applications, the image forming apparatus comprising:  
a virtual machine that is executed as one of the first applications;  
a second [[an]] application that is executed by the virtual machine; and  
an application management part managing the second application that is executed by the virtual machine.
2. (Currently Amended): The image forming apparatus as claimed in claim 1, wherein the second application that is executed by the virtual machine operates the image forming apparatus by using classes for controlling the image forming apparatus.
3. (Original): The image forming apparatus as claimed in claim 2, wherein the classes include an operation panel class for outputting information to an operation panel of the image forming apparatus and for inputting information from the operation panel.
4. (Currently Amended): The image forming apparatus as claimed in claim 1, wherein the application management part includes execution management functions that include a function for launching the second application executed by the virtual machine.

5. (Currently Amended): The image forming apparatus as claimed in claim 1, wherein the second application management part downloads the application when the application is not installed in the image forming apparatus.

6. (Currently Amended): The image forming apparatus as claimed in claim 1, wherein the application management part refers to an application information file associated with the second application, and updates the second application on the basis of information in the application information file.

7. (Currently Amended): The image forming apparatus as claimed in claim 6, wherein the application management part compares a first version described in the application information file associated with the second application with a second version described in another application information file associated with an update application, and the application management part replaces the second application with the update application if the second version is newer than the first version.

8. (Currently Amended): The image forming apparatus as claimed in claim 5, wherein the application management part downloads the second application from a memory card or from a Web site.

9. (Currently Amended): The image forming apparatus as claimed in claim 6, wherein the application management part downloads the second application from a location described in the application information file associated with the second application.

10. (Currently Amended): The image forming apparatus as claimed in claim 6, wherein the application management part checks whether the second application is executable in the image forming apparatus before downloading the second application.

11. (Currently Amended): The image forming apparatus as claimed in claim 10, wherein the application management part checks whether the second application is executable on the basis of information described in the application information file associated with the second application.

12. (Currently Amended): The image forming apparatus as claimed in claim 10, wherein the application management part checks items including a resource item in the image forming apparatus necessary for executing the second application.

13. (Original): The image forming apparatus as claimed in claim 1, wherein the image forming apparatus includes a server application that receives an operation request from a terminal apparatus connected to the image forming apparatus and that operates the image forming apparatus according to the operation request.

14. (Original): The image forming apparatus as claimed in claim 13, wherein the application management part communicates with the terminal apparatus.

15. (Currently Amended): A terminal apparatus that operates an image forming apparatus configured to be able to include a plurality of applications, the terminal apparatus comprising:

a virtual machine;

an application that is executed by the virtual machine and that operates the image forming apparatus by using classes for controlling the image forming apparatus, the classes including a function for displaying, on the terminal apparatus, an emulated screen of a screen displayed on an operation panel of the image forming apparatus; and  
an application management part managing the application that is executed by the virtual machine.

16. (Currently Amended): The terminal apparatus as claimed in claim 15, wherein the terminal apparatus is connected to the image forming apparatus via a network, ~~and the application that is executed by the virtual machine operates the image forming apparatus by using classes for controlling the image forming apparatus.~~

17. (Original): The terminal apparatus as claimed in claim 15, wherein the terminal apparatus operates the image forming apparatus by using a Java based distributed object processing technique.

18. (Canceled).

19. (Original): The terminal apparatus as claimed in claim 15, wherein the terminal apparatus has a function for allowing a user to select whether to access a hard disk of the image forming apparatus or to access a hard disk of the terminal apparatus.

20. (Original): The terminal apparatus as claimed in claim 15, wherein the application management part includes execution management functions that include a function for launching the application.

21. (Original): The terminal apparatus as claimed in claim 20, wherein the application management part downloads the application when the application is not installed in the terminal apparatus by communicating with the image forming apparatus.

22. (Original): The terminal apparatus as claimed in claim 15, wherein the application management part refers to an application information file associated with the application, and updates the application on the basis of information in the application information file.

23. (Original): The terminal apparatus as claimed in claim 15, wherein the application management part downloads the application from a memory card that is inserted in the image forming apparatus or from a Web site.

24. (Original): The terminal apparatus as claimed in claim 23, wherein the application management part receives file information stored in the memory card and displays the file information on the terminal apparatus.

25. (Original): The terminal apparatus as claimed in claim 23, wherein the application management part sends URL information input into the terminal apparatus to the image forming apparatus, so that the image forming apparatus downloads the application from the Web site by using the URL information.

26. (Currently Amended): A method for operating an image forming apparatus configured to be able to include a plurality of applications by using an application that is executed on a terminal apparatus connected to the image forming apparatus via a network,

wherein the image forming apparatus includes a virtual machine that is one of the plurality of applications and a server application executed by the virtual machine, and the terminal apparatus includes a virtual machine and the application,

wherein the server application receives an operation request sent by the application in the terminal apparatus, so that the server application operates the image forming apparatus according to the operation request.

27. (Original): The method as claimed in claim 26, wherein the terminal apparatus operates the image forming apparatus by using a Java based distributed object processing technique.

28. (Original): The method as claimed in claim 26, wherein the image forming apparatus includes an application management part for managing the application, and the terminal apparatus includes a remote application management part for managing the application by communicating with the application management part.

29-47. (Canceled).

48. (Currently Amended): A computer readable recording medium storing a computer program executed in an image forming apparatus that includes a control part configured to provide that provides common services on control of hardware resources to a plurality of first applications that are executed in the image forming apparatus using the

~~common services provided by the central part so as to be able to include a plurality of applications, the computer program comprising:~~

~~virtual machine program code means that is executed as one of the first applications; application management program code means managing [[an]] a second application that is executed by the virtual machine program code means.~~

49. (Currently Amended): The computer readable recording medium as claimed in claim 48, wherein the computer program includes classes that [[is]] are used by the second application and that controls the image forming apparatus.

50. (Original): The computer readable recording medium as claimed in claim 49, wherein the classes includes an operation panel class for outputting information to an operation panel of the image forming machine and for inputting information from the operation panel.

51. (Currently Amended): The computer readable recording medium as claimed in claim 48, wherein the application management program code means includes execution management functions that include a function for launching the second application.

52. (Currently Amended): The computer readable recording medium as claimed in claim 51, wherein the application management program code means downloads the second application when the second application is not installed in the image forming apparatus.

53. (Currently Amended): The computer readable recording medium as claimed in claim 48, wherein the application management program code means refers to an application

information file associated with the second application, and updates the second application on the basis of information in the application information file.

54. (Currently Amended): The computer readable recording medium as claimed in claim 53, wherein the application management program code ~~means~~ compares a first version described in the application information file associated with the second application with a second version described in another application information file associated with an update application, and the application management program code ~~means~~ replaces the second application with the update application if the second version is newer than the first version.

55. (Currently Amended): The computer readable recording medium as claimed in claim 53, wherein the application management program code ~~means~~ downloads the second application from a location described in the application information file associated with the second application.

56. (Currently Amended): The computer readable recording medium as claimed in claim 53, wherein the application management program code ~~means~~ checks whether the second application is executable in the image forming apparatus before downloading the second application.

57. (Currently Amended): The computer readable recording medium as claimed in claim 56, wherein the application management program code ~~means~~ checks whether the second application is executable on the basis of information described in the application information file associated with the second application.

58. (Currently Amended): The computer readable recording medium as claimed in claim 56, wherein the application management program code ~~means~~ checks items including a resource item in the image forming apparatus necessary for executing the second application.

59. (Original): The computer readable recording medium as claimed in claim 48, wherein the computer program further includes a server application program that receives an operation request from a terminal apparatus connected to the image forming apparatus and that operates the image forming apparatus according to the operation request.

60. (Currently Amended): A computer readable recording medium storing a computer program executed in a terminal apparatus that operates an image forming apparatus configured to be able to include a plurality of applications, the computer program comprising:

virtual machine program code ~~means~~; and  
application management program code ~~means~~ managing an application that is executed by the virtual machine program code ~~means~~, wherein the computer program includes classes that are used by the application and that control the image forming apparatus, the classes include a function for displaying, on the terminal apparatus, an emulated screen of a screen displayed on an operation panel of the image forming apparatus.

61. (Canceled).

62. (Original): The computer readable recording medium as claimed in claim 60, wherein the computer program causes the terminal apparatus to operate the image forming apparatus by using a Java based distributed object processing technique.

63. (Canceled).

64. (Currently Amended): The computer readable recording medium as claimed in claim 60, wherein the application management program code means includes execution management functions that include a function for launching the application.

65. (Currently Amended): The computer readable recording medium as claimed in claim 64, wherein the application management program code means downloads the application when the application is not installed in the terminal apparatus by communicating with the image forming apparatus.

66. (Currently Amended): The computer readable recording medium as claimed in claim 60, wherein the application management program code means refers to an application information file associated with the application, and updates the application on the basis of information in the application information file.